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AMSAT NEWS SERVICE
ANS-100

The AMSAT News Service bulletins are a free, weekly news and information service of AMSAT, The Radio Amateur Satellite Corporation. ANS publishes news related to Amateur Radio in Space including reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

The news feed on http://www.amsat.org publishes news of Amateur Radio in Space as soon as our volunteers can post it.

Please send any amateur satellite news or reports to: ans-editor [at] amsat.org

You can sign up for free e-mail delivery of the AMSAT News Service Bulletins via the ANS List; to join this list see: https://mailman.amsat.org/postorius/lists/ans.amsat.org/

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ANS-100 AMSAT News Service Weekly Bulletins

To: All RADIO AMATEURS
From: Radio Amateur Satellite Corporation
712 H Street NE, Suite 1653
Washington, DC 20002

DATE 2022 April 10

Axiom Private Astronauts Headed to International Space Station

Four private astronauts are in orbit following the successful launch of Axiom Mission 1 (Ax-1), the first all private astronaut mission to the International Space Station. Axiom Space astronauts lifted off at 15:17 UTC on Friday, April 8, from Launch Complex 39A at NASA's Kennedy Space Center in Florida.

A SpaceX Falcon 9 rocket propelled the Dragon Endeavour spacecraft carrying Ax-1 crew members Michael López-Alegría, KE5GTK, Larry Connor, Mark Pathy, KO4WFH, and Eytan Stibbe, 4Z9SPC, into orbit. The crew will spend more than a week conducting scientific research, outreach, and commercial activities on the space station.

[Outreach activities for the Axiom crew include a flurry of ARISS school contacts in the coming week. See ARISS News, below.]

Once aboard the station, the Axiom crew will be welcomed by Expedition 67 crew members, including NASA astronauts Thomas Marshburn, KE5HOC, Raja Chari, KI5LIU, and Kayla Barron, KI5LAL, ESA (European Space Agency) astronaut Matthias Maurer, KI5KFH, and Roscosmos cosmonauts Oleg Artemyev, Sergey Korsokov, and Denis Matveev.

Axiom Space astronauts are expected to spend about 10 days in orbit before a return to Earth and splashdown at one of seven landing sites off the coast of Florida. NASA and Axiom will release separate advisories to preview the Ax-1 farewell event and return coverage.

Learn more about how NASA is supporting a space economy in low-Earth orbit: https://www.nasa.gov/leo-economy

[ANS thanks spaceref.com and NASA for the above information]

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[ANS thanks ARRL for the above information]

AMSAT Discord Server Open to All

AMSAT is pleased to announce the availability of a Discord server for the amateur satellite community. Discord is a text, voice, and video client that has become very popular in recent years. Discord will provide the amateur satellite community with an additional option to communicate amongst each other, in real-time.

Discord provides several neat features, including the following:

* Ability to create channels, to organize different conversation topics
* Hosting of events, that can include voice and or video chat
* For satellite launch parties!
* Use of bots to automate useful actions
  -Try typing /tle AO-92
  -More commands are in development!
* Notification of Twitter posts of interest
  -Currently only following @AMSAT Twitter account

A special section of the server is reserved for AMSAT members. If you are a current member, please send a message in the #request-roles channel once you join the server, indicating whether you are a member or life member. Once the member role is granted, you will be able to post in the “Members Only” category. If you are not yet an AMSAT member, join today at https://launch.amsat.org/.

The link below can be used to join the server. See you in Discord!

https://discord.gg/xbTXcPJHyt

[ANS thanks AMSAT for the above information]

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New FCC Application Fee Will Not Apply to Amateur License Upgrades

The Federal Communications Commission (FCC) staff has clarified in response to an ARRL request that the new $35 application fee will not apply to most license modifications, including those to upgrade amateur radio licensee's operator class and changes to club station trustees. The FCC staff explained that the new fees will apply only to applications for a new license, renewal, rule waiver, or a new vanity call sign. As previously announced, the new fees take effect on April 19, 2022.

"We are pleased that the FCC will not charge licensees the FCC application fee for license upgrade applications," said ARRL Volunteer Examiner Coordinator (VEC) Manager Maria Somma, AB1FM. "While applicants for a new license will need to pay the $35 FCC application fee, there will be no FCC charge for future upgrades and administrative updates, such as a change of mailing or email address. Most current licensees, therefore, will not be charged the new FCC application fee until they renew their license or apply for a new vanity call sign."

ARRL previously reported that the new $35 application fee for amateur radio licenses will become effective on April 19, 2022. Further information and instructions about the FCC Application Fee are available from the ARRL VEC page at, https://www.arrl.org/fcc-application-fee

[ANS thanks ARRL News for the above information]

ARISS NEWS

Amateurs and others around the world may listen in on contacts between amateurs operating in schools and allowing students to interact with astronauts and cosmonauts aboard the International Space Station. The downlink frequency on which to listen is 145.800 MHz worldwide, unless otherwise noted.

These contacts were recently completed successfully:

Leonardo-Da-Vinci Campus Nauen, Nauen, Germany, direct via DC1RSN in contact with ESA astronaut Matthias Maurer, KI5KFH, operating as DPØISS. The contact was completed on Wednesday, 2022-04-06 at 11:48:08 UTC on a 26 degree pass. Congratulations to the Leonardo-Da-Vinci Campus Nauen students and Matthias!

Space Hardware Club, Huntsville, Alabama, direct via K4UAH in contact with astronaut Thomas Marshburn, KE5HOC, operating as NA1SS. The contact was completed on Thursday 2022-04-07 at 17:07:39 UTC on a 36 degree pass. Congratulations to Space Hardware Club and Thomas!

These contacts are scheduled for the coming week:

DLR_School_Lab TU Dresden, Dresden, Germany, direct via DLØTSD in contact with ESA astronaut Matthias Maurer, KI5KFH, operating as DPØISS. Contact is go for: Mon 2022-04-11 14:14:21 UTC 44 degrees. Watch for Livestream at: https://www.youtube.com/watch?v=3LKjD2QlisM

École Secondaire St. Albert Catholic High School, St. Albert, AB, Canada, telebridge via IK1SLD in contact with Axiom astronaut Mark Pathy, KO4WFH, operating as OR4ISS. Contact is go for: Mon 2022-04-11 15:50:31 UTC 33 degrees. Watch for Livestream starting about 15 minutes before AOS: www.ariotti.com and https://www.youtube.com/channel/UCA55YJg_jvRtoEBPKK-p__A

Dr. David R. William School, Oakville, ON, Canada, Telebridge via K6DUE in contact with Axiom astronaut Mark Pathy, KO4WFH, operating as NA1SS. Contact is go for: Wed 2022-04-13 13:57:41 UTC 86 degrees.

École Secondaire Sainte Marguerite d'Youville, St. Albert, AB, Canada, telebridge via AB1OC in contact with Axiom astronaut Mark Pathy, KO4WFH, operating as NA1SS. Contact is go for: Wed 2022-04-13 15:36:27 UTC 24 degrees.

Rakia - Herzliya Science Center, Herzliya, Israel, direct via 4X4HSC in contact with Axiom astronaut Eytan Stibbe, 4Z9SPC. Contact is go for: Thu 2022-04-14 13:32:09 UTC 89 degrees. Watch for Livestream at https://www.youtube.com/channel/UC1gJRBkNXyv5tbMZkmjzi4g and ARISS YouTube channel.

École Elementaire Ste. Jean D'Arc, London, ON, Canada, Telebridge via AB1OC in contact with Axiom astronaut Mark Pathy, KO4WFH, operating as NA1SS. Contact is go for: Thu 2022-04-14 14:47:54 UTC 31 degrees.

École Marie Poburan, St. Albert, AB, Canada, telebridge via VK5ZAI in contact with Axiom astronaut Mark Pathy, KO4WFH, operating as NA1SS. Contact is go for: Thu 2022-04-14 17:20:49 UTC 35 degrees.

SSTV Event

Watch for SSTV event honoring Cosmonautics Day and Women in Space starting 2022-04-11 at 16:30 UTC and ending 2022-04-13 at 12: 00 UTC. The mode will be PD120.

The latest information on the operation mode can be found at https://www.ariss.org/current-status-of-iss-stations.html

The latest list of frequencies in use can be found at https://www.ariss.org/contact-the-iss.html

[ANS thanks Charlie Sufana, AJ9N, one of the ARISS operation team mentors for the above information]

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LoTW: CT7/EA4NF

FK78 British Virgin Islands: VP2V/N2IEN – N2IEN, WW2DX, WW1X, W2RE and KB2HZI holiday style to FK78pj April 10-16, 2022. 6M-160M with focus on higher bands. Possibly some #amsat passes. No EME this trip. QSL to EB7DX @david_lianez @DAILYDX @DX_World @dxcoffee (from Twitter)

[ANS thanks Paul Overn, KE0PBR, AMSAT rover page manager, for the above information]

Hamfests, Conventions, Maker Faires, and Other Events

AMSAT Ambassadors provide presentations, demonstrate communicating through amateur satellites, and host information tables at club meetings, hamfests, conventions, maker faires, and other events.

N4HF is heading out to the NC Hamfest! NC Hamfest, Saturday April 16, there will be a forum (presented by Ernie, N4AEW), demos (by John KG4AKV), and an info table (manned by me, N4HF) Jim Graham Building – NC State Fairgrounds 4285 Trinity Rd, Raleigh, NC 27607 https://www.rarsfest.org/

Brainerd Area Hamfest: Brainerd National Guard Armory: 4/23/22 https://brainerdham.org/

Hamvention (see call for volunteers, above)
May 20-22, 2022
Greene County Fairgrounds & Expo Center
120 Fairgrounds Road
Xenia, OH 45385
https://www.hamvention.org

2022 Rocky Mountain ARRL Division Convention
Friday, October 7th, 2022 to Sunday, October 9th, 2022
Event Center at Archer
3921 Archer Pkwy
Cheyenne, Wyoming 82007
https://wyhamcon.org/site

[ANS thanks Paul Overn, KE0PBR, AMSAT Events page manager, for the above information]

AMSAT Ambassador Activity Report

Jack Spitznagel, KD4IZ, gave a virtual presentation on March 26, on general SDR usage and the Fox-In-A-Box Raspberry Pi image, to the Dallas Amateur Radio Club "Lecture and Lab" special interest group organized by Bill Brady, KF5ZBL. It was well received and many of the participants had their RTL-SDR and RPi SBC's ready to go. They experimented with the software during the lab portion while Jack reviewed the slides on configuration and answered questions.

The Club also expressed interest in having a live demonstration of the CubeSat Simulator and building one of the simple L.B. Cebik turnstyle antenna designs that was presented. Jack reached out to Dallas area AMSAT Ambassador Tom Scheussler, N5HYP, who will follow up.

On April 2, a second live presentation was made to a local club to the K3AE/South Pennsylvania Communications Group based in Shrewsbury and York County, Penn., of which Jack is a member. Again the presentation was well received and many questions came up. This time he added a live

demonstration of the CubeSat Simulator Mini prototype and had participants bring their 434 MHz capable HT's to monitor the sound of the various telemetry streams.

This club has become increasingly interested in Satellite and Balloon ops. Their balloon team recently launched the W3UAV-7 APRS balloon which is now on the second circumnavigation pass around the globe. They plan to have Jack bring the full size simulator to the summer township Fireman's fair where the club will have a booth demonstrating all of their activities, from HF and VHF contesting to fast scan TV and satellite ops. Among our exhibits, they will have a complete satellite ground station on display and we will attempt some contacts from FM19ps. Stay tuned for the "rove" announcement.

The PDF of the presentation (which may be shared) is at:
https://www.dropbox.com/s/h8o63ok1ccjc6ze/SDR%20applications%20ver3.pdf?dl=0

It lacks the A/V screen grabs that the PowerPoint uses.

[ANS thanks Jack Spitznagel, KD4IZ, AMSAT Ambassador, for the above information]

Satellite Shorts From All Over

+ Morazán is a project for Central American integration through cooperation in space. Its objective is to put into orbit the first Honduran satellite developed by the National Autonomous University of Honduras with the cooperation of the University of Costa Rica and the University of San Carlos of Guatemala. The project is led by the Secretariat of the Central American Integration System and has the support of the Radio Clubs of Honduras and Costa Rica, as well as the Federated College of Engineers and Architects of Costa Rica. (ANS thanks https://ti0rc.org/amsat-ti for the above information)

+ The Portland State University publication, PSU Vanguard, published a feature story about the Portland State Aerospace Society and the successful launch of their OreSat0 satellite. The launch took place on March 15, 2022, and the satellite downlinks on 436.500 MHz and 2425.00 MHz using 9k6 G3RUH AX25/APRS packet beacons. Amateur radio is mentioned briefly in the article, which may be found at https://bit.ly/3766ZUB (ANS thanks PSU Vanguard for the above information)

+ NASA officials said on Tuesday, April 5, that they are standing down from a cryogenic loading test on the agency’s Space Launch System moon rocket until after the launch of a commercial crew mission from a neighboring pad at the Kennedy Space Center. [That launch took place on April 8.] A countdown test Monday, April 4, was delayed by what NASA managers characterized as minor issues. The countdown dress rehearsal is a key test before NASA completes final preparations on the Space Launch System and Orion crew capsule. The giant rocket is set to launch no earlier than June on the unpiloted Artemis 1 test flight around the moon, laying the groundwork for future lunar missions with astronauts on-board. (ANS thanks SpaceFlightNow for the above information)

+ Amazon announced the largest commercial launch deal in history April 5, revealing agreements for up to 83 missions to deploy thousands of internet satellites on United Launch Alliance’s Vulcan Centaur rocket, Arianespace’s Ariane 6, and Blue Origin’s New Glenn vehicle. The agreements solidify the commercial business cases for all three rockets, more than doubling the backlogs for Vulcan Centaur, Ariane 6, and New Glenn rockets before any of them have ever flown. Amazon’s Kuiper network, similar in concept to SpaceX’s Starlink constellation and the OneWeb satellite fleet, will

provide low-latency Ka-band broadband internet connectivity to customers between 56 degrees north and 56 degrees south latitude. (ANS thanks SpaceFlightNow for the above information)

+ SpaceX has lost the right to provide Starlink broadband services in France after the country's highest administrative court revoked its spectrum license. France's Conseil d'État ruled April 5 that French telecoms regulator ARCEP should have launched a public consultation before authorizing Starlink in February 2021. The ruling came after Priartem and Agir Pour L'Environnement, two French environmental activist organizations, submitted an appeal to challenge ARCEP's decision to award Starlink frequency rights. Agir pour l'Environnement (Acting for the Environment), has called for stronger regulations on megaconstellations to protect views of the night sky and reduce space debris risks. (ANS thanks SpaceNews for the above information)

+ On April Fools Day, SpaceX launched their fourth dedicated SSO rideshare mission with 40 spacecraft onboard. The largest payload was the German hyperspectral Environmental Mapping and Analysis Program satellite at 980 kg. Other payloads included 5 ÑuSat visible + IR Earth observation sats, 12 Swarm 1/4U (400g) Spacebees, GNOMES-3 (radio occultation weather forecasting), Albania's first satellite (Albania-1), amateur radio BDSat, and D-Orbit's ION SCV orbital transfer vehicle that will host or later release "four Kleos Space CubeSats, three CubeSats from the University of Chile, and a passive payload for Spacelust called Upmosphere." SpaceX's Transporter-5 is scheduled for June. (ANS thanks The Orbital Index for the above information)

Join AMSAT today at https://launch.amsat.org/

In addition to regular membership, AMSAT offers membership to:

* Societies (a recognized group, clubs or organization).
* Primary and secondary school students are eligible for membership at one-half the standard yearly rate.
* Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status.
* Memberships are available for annual and lifetime terms.

Contact info [at] amsat.org for additional membership information.

73 and remember to help Keep Amateur Radio in Space!

This week's ANS Editor, Mark Johns, K0JM
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